

PATENT COOPERATION TREATY

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REC'D 15 DEC 2004

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference Lau PCT-3025	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/SE 2004/000464	International filing date (day/month/year) 26-03-2004	Priority date (day/month/year) 04-04-2003
International Patent Classification (IPC) or national classification and IPC G01M 11/00		
Applicant Sundquist Metall AB et al		

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 3 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☒ (sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:
 - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

Date of submission of the demand 20-09-2004	Date of completion of this report 29-11-2004
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Lars Jakobsson /itw Telephone No. +46 8 782 25 00

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE 2004/000464

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
☐ publication of the international application (under Rule 12.4)
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1-4 _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the claims:

pages _____ as originally filed/furnished

pages* 5-6 _____ as amended (together with any statement) under Article 19

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the drawings:

pages 1 _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
☐ the claims, Nos. _____
☐ the drawings, sheets/figs _____
☐ the sequence listing (*specify*): _____
☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
☐ the claims, Nos. _____
☐ the drawings, sheets/figs _____
☐ the sequence listing (*specify*): _____
☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE 2004/000464

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-5</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-5</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-5</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Documents cited in the International Search Report:

US 4077427, A
US 3583435, A
US 1959863, A
US 4068522, A

None of the documents describes a device to determine if a flow-controlled gaseous medium has suffered any effects by a device having three spaced seals as defined in the amended claims.

The cited documents represent the general state of the art.
The invention defined in claims 1-5 is not disclosed by any of these documents.

Therefore, the claimed invention is not obvious to a person skilled in the art.

Accordingly, the invention defined in claims 1-5 is novel and is considered to involve an inventive step. The invention is industrially applicable.

PATENT COOPERATION TREATY

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12-11-2004

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NOTIFICATION CONCERNING WRITTEN
OPINION OF THE INTERNATIONAL SEARCHING
AUTHORITY AND AMENDMENTS OF CLAIMS

(PCT Rule 62 and
Administrative Instructions, Section 417(d))

From the INTERNATIONAL BUREAU

To:

Swedish Patent Office
P.O. Box 5055
S-102 42 Stockholm
Sweden

In its capacity as International Preliminary Examining Authority

Date of mailing (day/month/year)

03 November 2004 (03.11.2004)

International application No.

PCT/SE2004/000464

International filing date (day/month/year)

26 March 2004 (26.03.2004)

Applicant

SUNDQUIST METALL AB et al

The International Bureau hereby transmits a copy of the amendments to the claims under Article 19 together with any accompanying statement (Rule 62.1(ii)).

The International Bureau of WIPO
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1211 Geneva 20, Switzerland

Facsimile No. (41-22) 338.70.90

Authorized officer

Rodolfo CLEMENTE

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21-July-04

PATENT CLAIMS

1. Device (1) to determine if a flow-controlled gaseous medium has suffered any effects, the device, in the normal operating position, allowing the medium free and direct through-passage and, in the testing position, allowing the medium to pass through an indicator (19), e.g. a fluid, that indicates the type of influence to which the medium has been exposed. Said device (1) comprises a housing (2) with a flow control body (3) that can move between two positions, the medium being able to flow directly through the device (1) with said body in one of its positions and being forced to flow through the indicator (19) with said body in its other position, the housing (2) and flow control body (3) being so designed that, with the latter in one of its positions (the upper position), the medium flows directly through the device (1) while, contemporaneously, the indicator (19) is closed off from the device's direct channel (5 - 7) for the medium and, with the flow control body (3) in its other position (the lower position), said channel (5 - 7) being broken and replaced by a channel (13) through the indicator, the whole being characterised by the flow control body (3) being cylindrical and mobile within a cylindrical cavity (4) in the housing (2) and, additionally, by the flow control body (3) having three seals (15 - 17) spaced along it and projecting from the body (3) to the perimeter of the cavity (4), the lower seal (17) and the middle seal (16) working together to form a direct through-flow channel (5 - 7) and the lower seal (17) completely closing off the indicator (19) from said direct through-flow channel (5 - 7).

2. Device as per patent claim 1, characterised by the flow control body (3) itself having a cavity (13) that, at the body's lower end, is completely open, there also being an opening (12) at the upper end of the cavity (13), said opening, when the flow control body (3) is in its lower position, forming a through-flow channel (5 - 13 - 7).

3. Device as per patent claim 1, characterised by the indicator (19) being a fluid such as propylene glycol in a compartment/housing (8) that, preferably, is transparent.

4. Device as per one or more of the preceding patent claims, characterised by the device being connected into a system for the use of liquefied petroleum gas, the connection being made in such a way that the device is capable of determining whether there is leakage.

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5. Device as per patent claim 1, characterised by the flow control body (3) constantly taking up a home position (the upper position) owing to the action of a spring (18).

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